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INTERNATIONAL PATENT OFFICE

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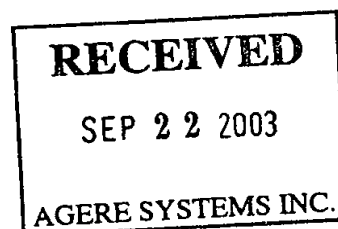
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via federal express  
September 19, 2003

Ms. Patricia Lott  
Docket Administrator  
**Agere Systems Inc.**  
Connell Corporate Center IV  
Intellectual Property-Law  
4 Connell Drive,  
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U. S. A.

**DOCKET**  
11/10/03 Response for issue.



Dear Ms. Lott:

Re.: Merchant, S.M. 33-3-3-Japan  
Japanese Patent Appln. No. H11-153701  
Our Case: AGE-572(T)

This reports the first Official Letter together with our translation thereof.

The term for reply to instant Office Action is going to expire on **November 20, 2003**,<sup>f</sup> but is extendible by three months upon request. If we do not receive your instructions by November 10, 2003, we will apply for three months extension.

Anticipation and obviousness rejections:

The Examiner has contended that the present inventions as set forth in claims 1, 2, 3, 5, 6, 7, 10 and 11 fall under Article 29, Paragraph 1, Item 3 of the Japanese Patent Law, because they are recognized to be the invention as described in the listed Reference 1 published prior to this application.

The Examiner has contended that the present inventions as set forth in all the claims is unpatentable under Article 29, Paragraph 2 of the Japanese Patent Law, because of obviousness from the listed Reference 1.

As stated by the Examiner, the listed reference 1 (the working Example 3, [0018] and claim 3) describes that Ti, TiN and W are deposited in this order on the insulating film 4, and after dry etching or grinding heated to 550°C or more using a halogen lamp or the like.

Please let us have your technical comments for distinguishing the present invention from the listed reference 1, in view of the Examiner's statements in the Official Letter.

Informality objection:

The examiner has contended that the feature "temperature sufficient to anneal said barrier" in claims 1 and 12 is indefinite.

The Examiner has suggested to add more concretized features concerning the temperature to anneal the barrier to claims 1 and 12 to execute the process claimed.

Very truly yours,

O K A B E  
International Patent Office

  
\_\_\_\_\_  
Patent Attorney  
Nobumitsu ASAHI

NA/YHY/kw

Encl.: as above

debit note (original to Agere Systems Accounts  
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**EXAMINER'S OFFICE LETTER**

AUG 18 2003

(Mailing Date: AUG 20 2003)

To: Applicant (Lucent Technologies Inc.)

Examiner : M. YASUDA

"METHOD OF FABRICATION OF CONTACTS IN AN INTEGRATED  
CIRCUIT DEVICE"

Patent Application No. H11-153701

The above-identified application is to be refused for the reason as put  
down. A reply to the present office action must be filed before NOV  
20 2003 (three-month extensible).

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=Note=

1. The present inventions as set forth in claims 1, 2, 3, 5, 6, 7, 10 and 11 fall under Article 29, Paragraph 1, Item 3 of the Japanese Patent Law, because they are recognized to be the invention as described in the listed reference published prior to this application.
2. The present inventions as set forth in all the claims are unpatentable under Article 29, Paragraph 2 of the Japanese Patent Law, because of obviousness from the listed reference.

The listed reference (especially, the working Example 3) describes that Ti, TiN and W are deposited in this order on the contact hole, and after grinding, heated to 550°C or more using a halogen lamp or the like. A process of forming films, a thickness of films, an aspect ratio of a hole, a temperature and time of annealing, a design width, etc., as the features in claims may suitably be selected by a person skilled in the art in view of properties of devices and conditions in the fabrication techniques.

Therefore, since it is not recognized that unexpected effects are brought by the present invention, the present invention including the above features may easily be made by a person skilled in the art. Further, claim 18 defines an annealing temperature ranging from about

600°C to about 750°C. However, it is not recognized that this temperature range is critical, since the present specification and figures have no descriptions as to how properties of the barrier film is affected according to annealing temperature, and the reference describes that an annealing can be carried out at 550°C or more without causing the problems.

3. This application does not satisfy the requirements as provided in Article 36, Paragraph 5 of the Japanese Patent Law, because the specification is recognized to be defective on the undermentioned point.

The feature "a temperature sufficient to anneal said barrier" in claims 1 and 12 is indefinite.

=List of References=

Reference 1: JP Laid-Open Patent Gazette No. 045764

=Record of Search of the Prior Arts=

Technical Field of Search:

IPC Version 7

H01L21/28-288

H01L21/768

This record of search of the prior art does not constitute Reason for Refusal.